

"Friction Plunge Riveting"  
Inventor Stol et al.; Alcoa Ref. 00-2521

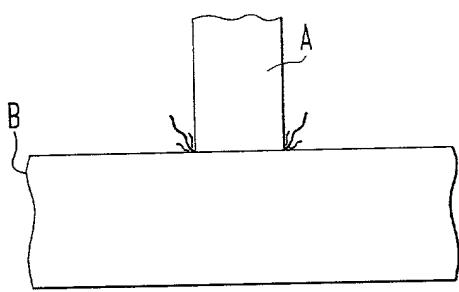


FIG. 1a  
PRIOR ART

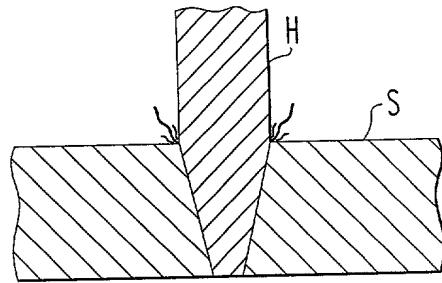


FIG. 1b  
PRIOR ART

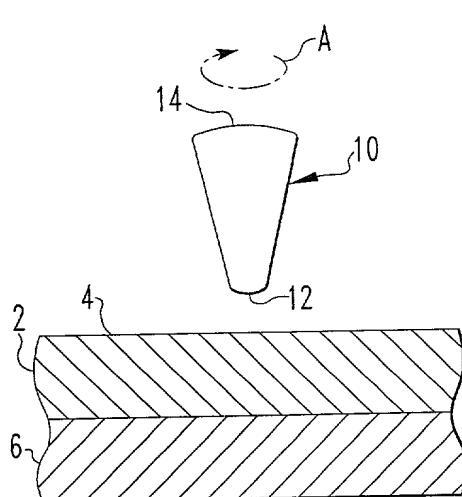


FIG. 2a

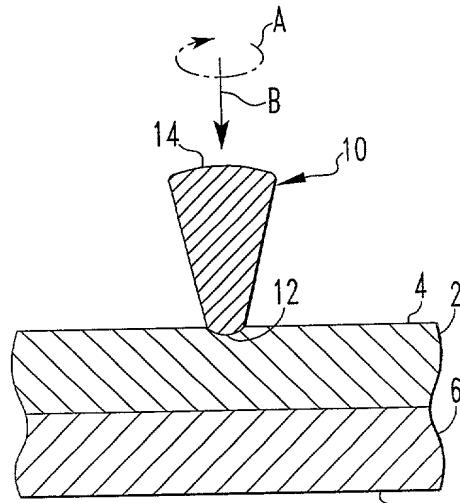


FIG. 2b

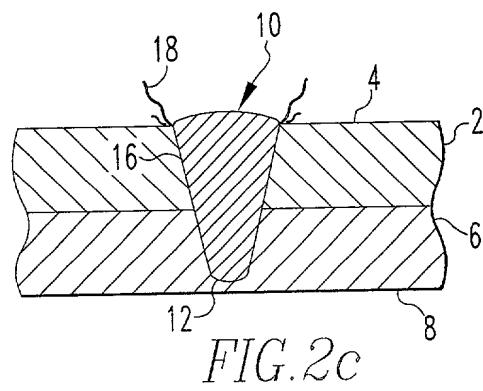
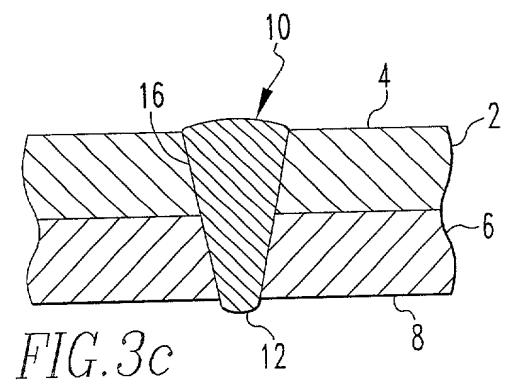
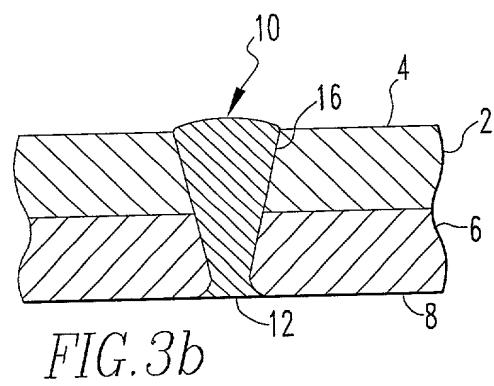
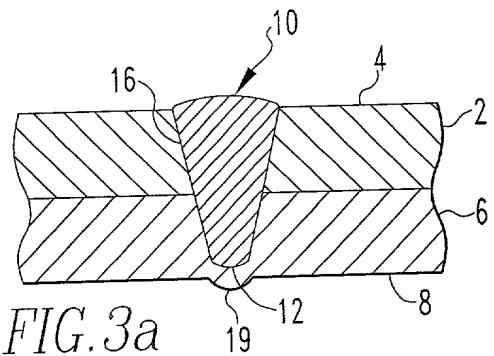


FIG. 2c

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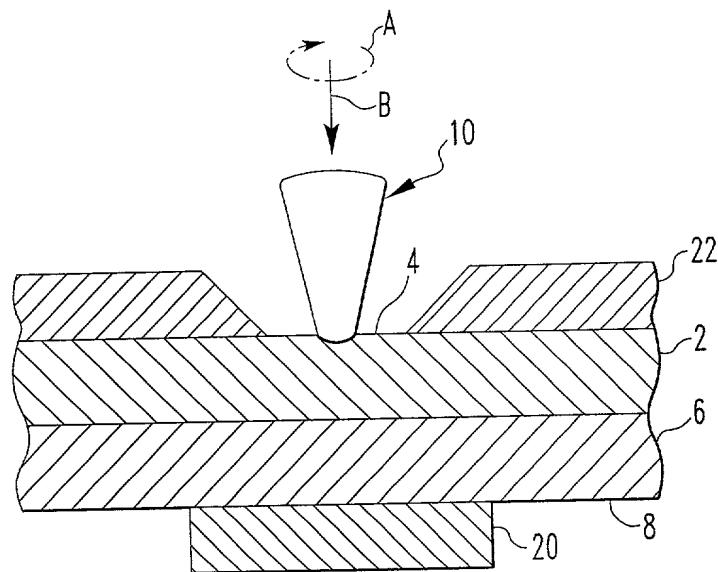


FIG. 4a

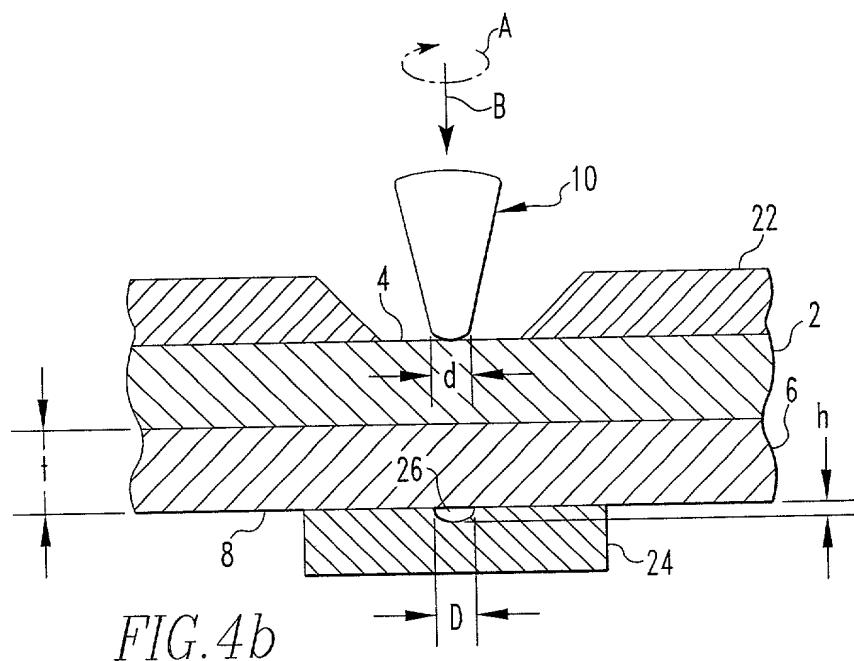
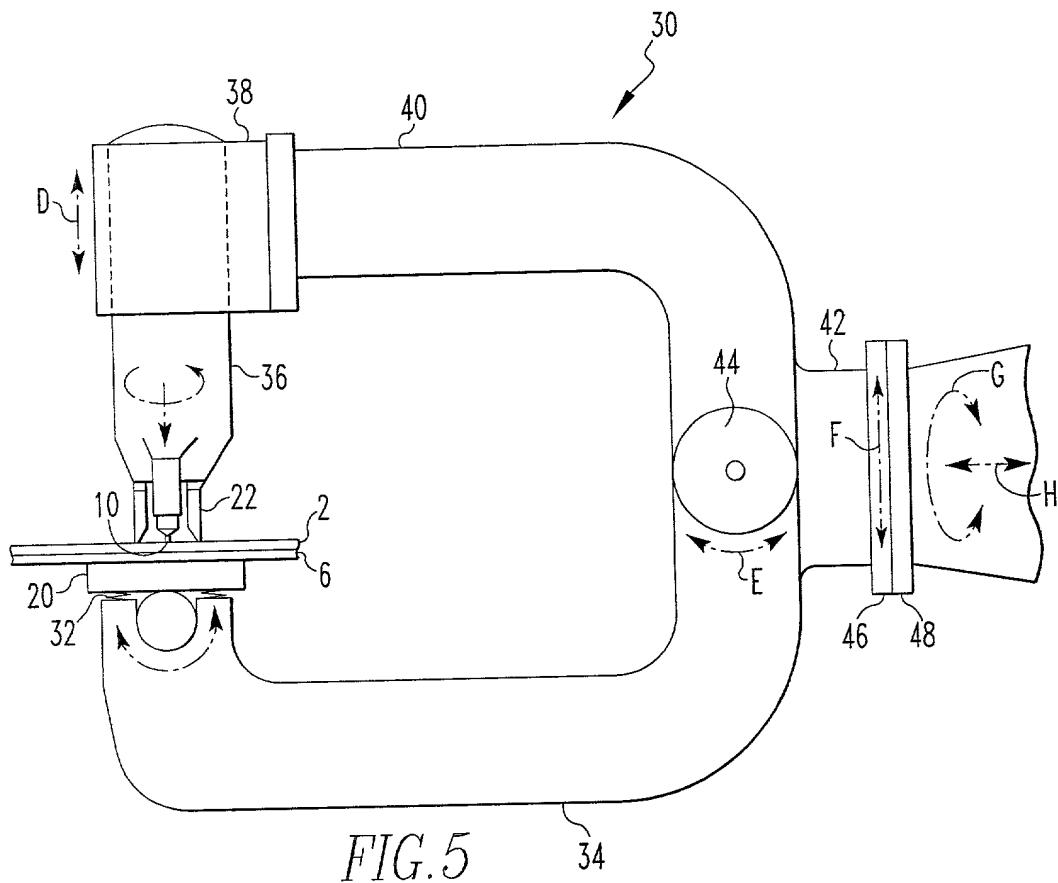
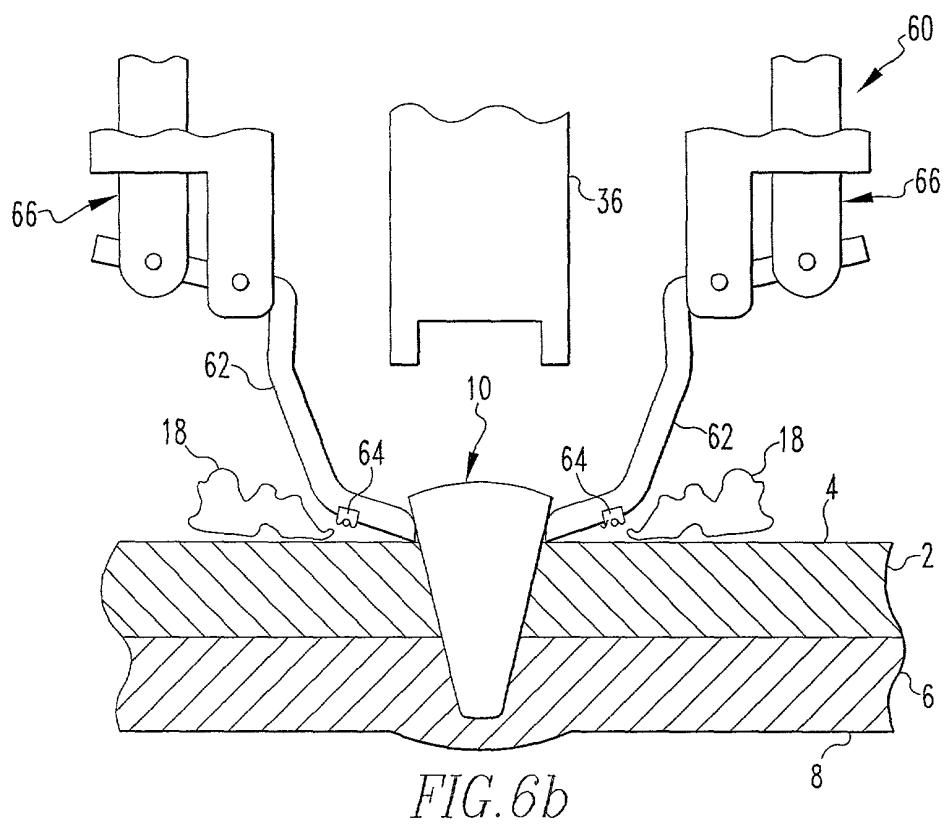
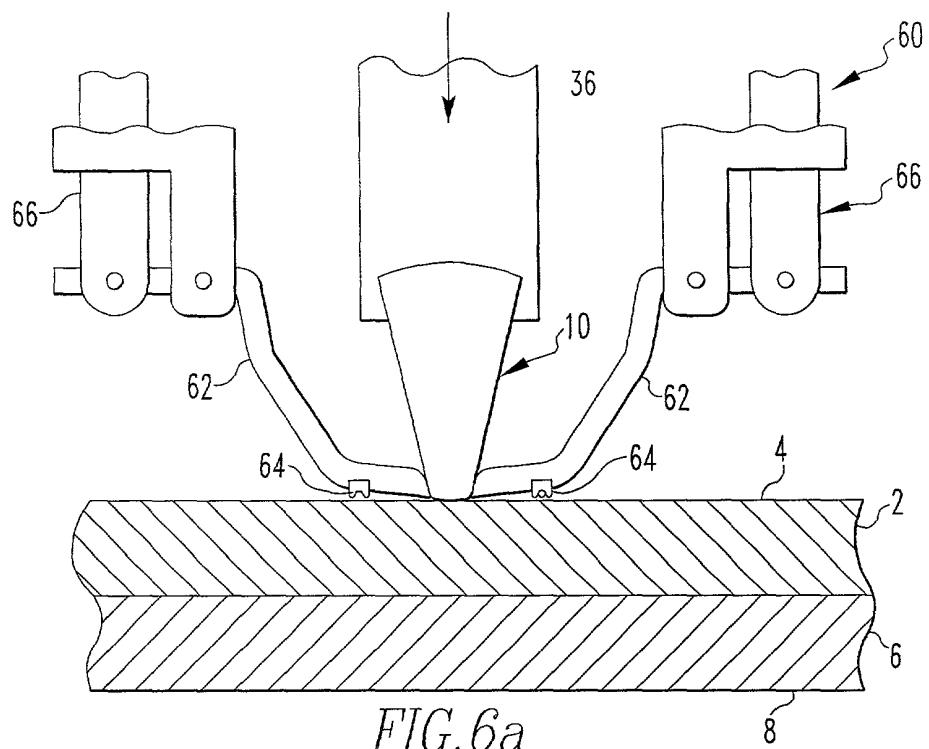


FIG. 4b

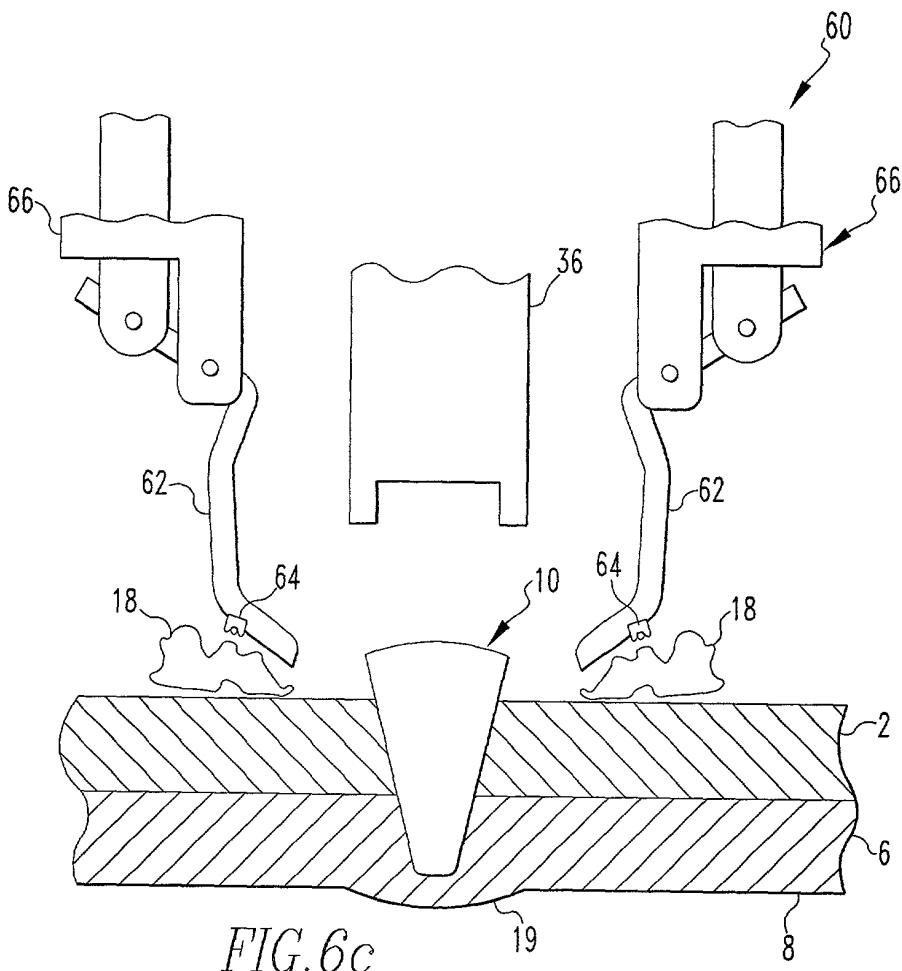
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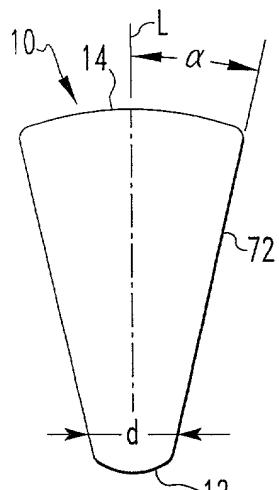


FIG. 7a

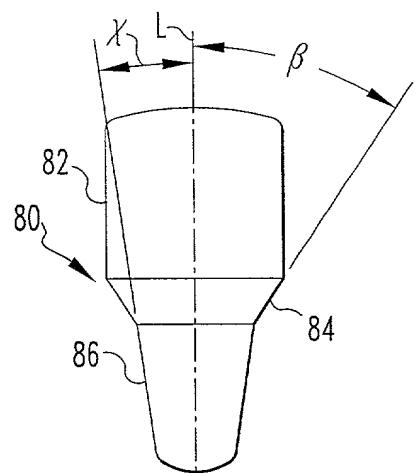


FIG. 7b

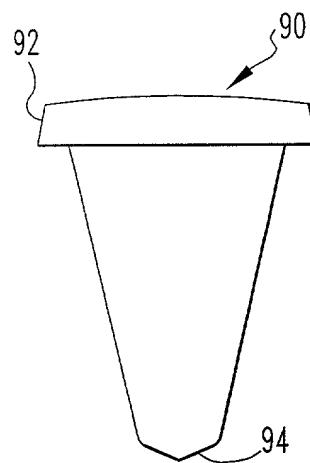


FIG. 7c

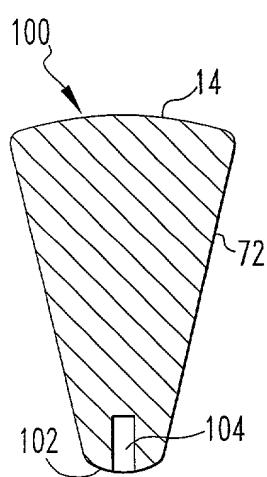


FIG. 7d

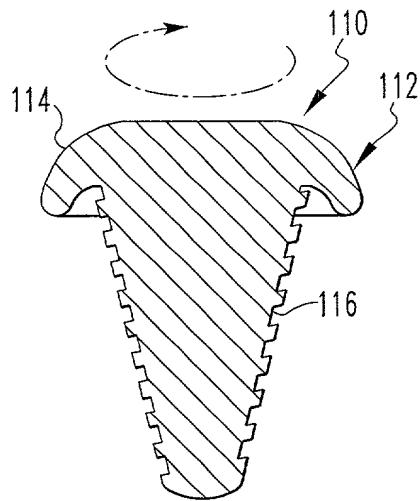


FIG. 7e

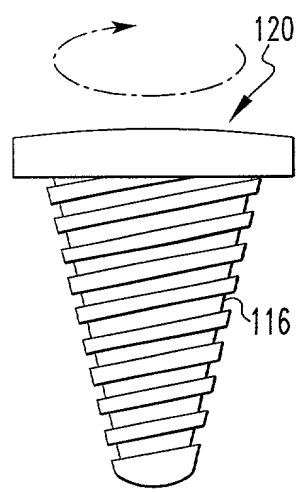


FIG. 7f

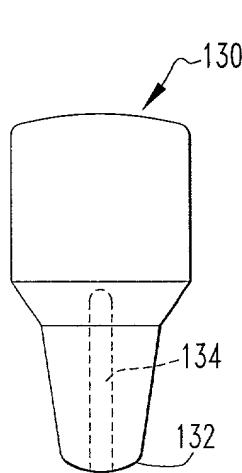


FIG. 7g

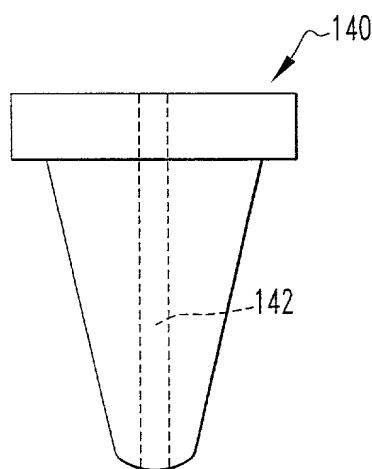


FIG. 7h

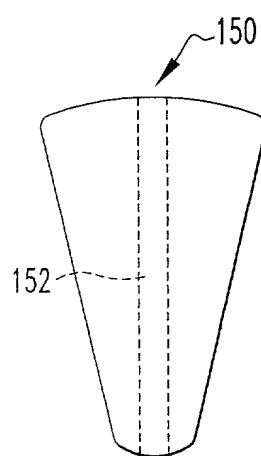


FIG. 7i

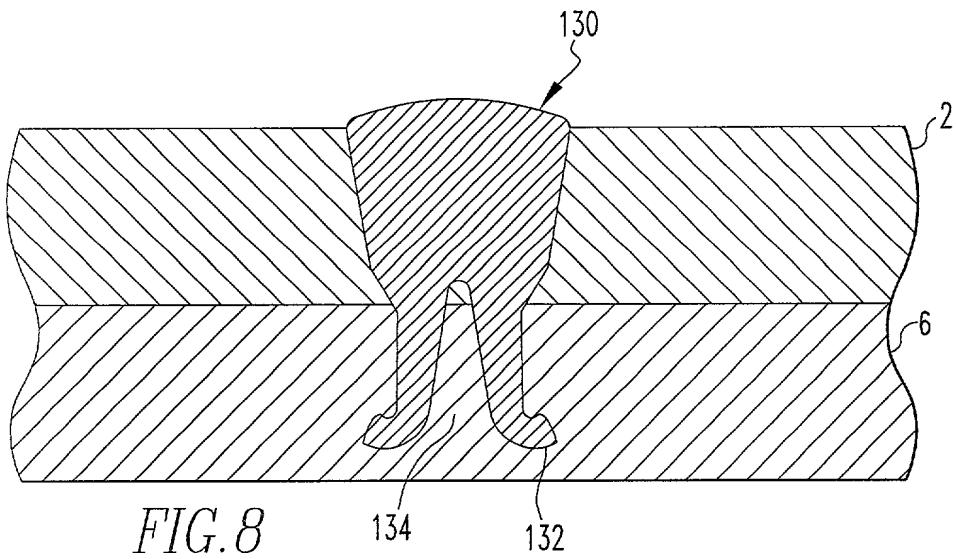


FIG. 8

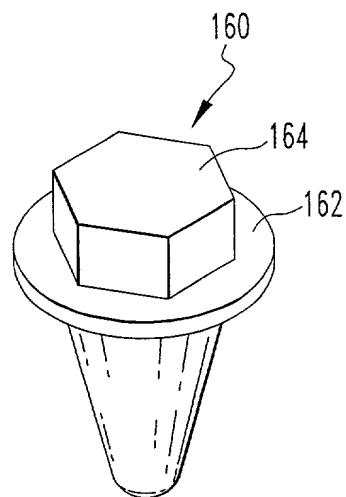


FIG. 9a

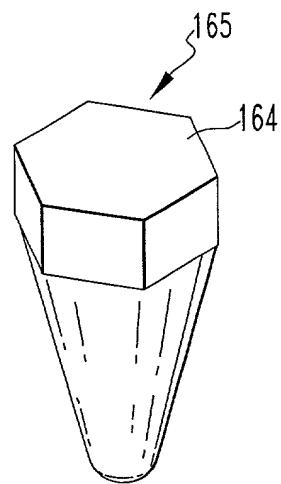


FIG. 9b

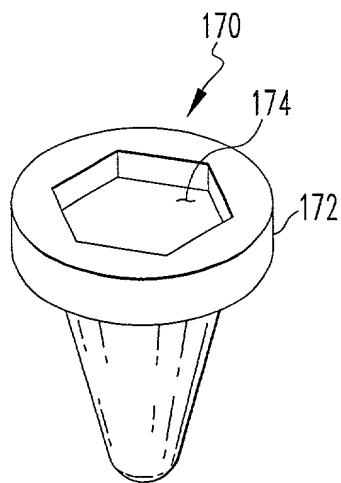


FIG. 9c

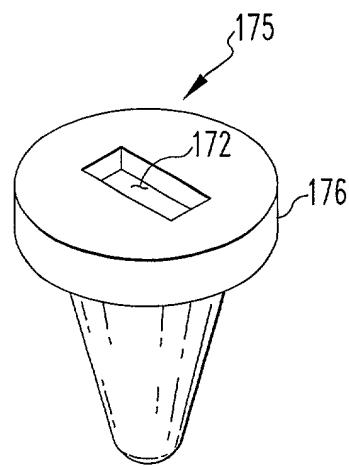
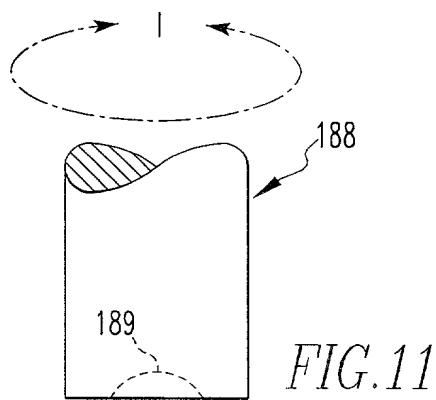
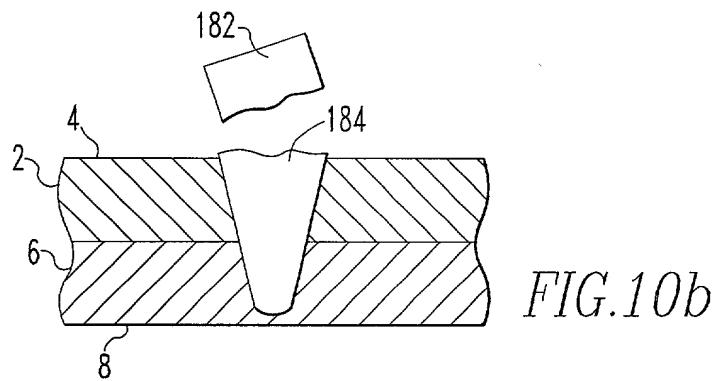
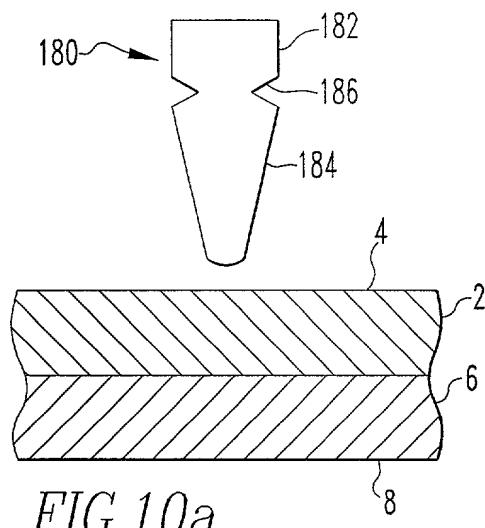
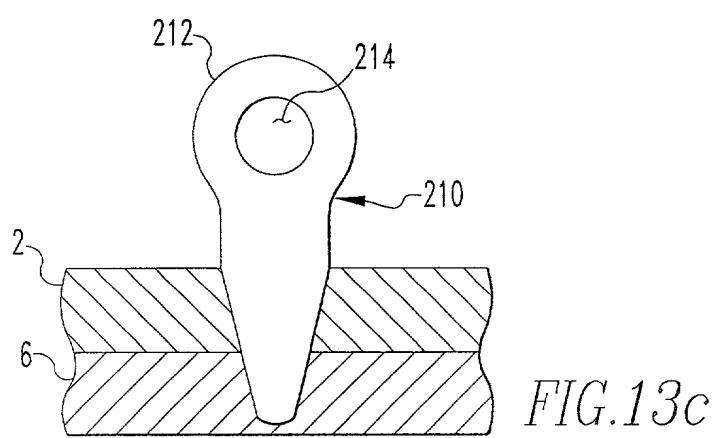
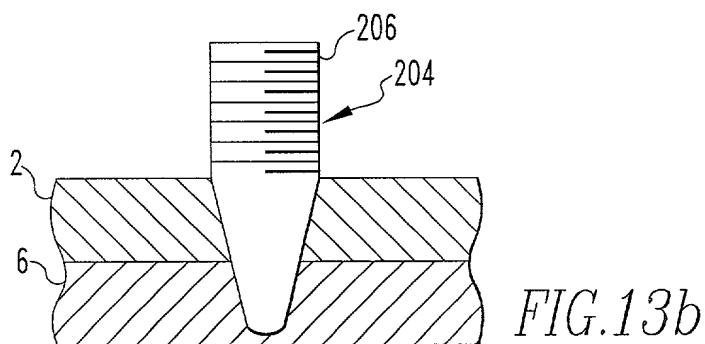
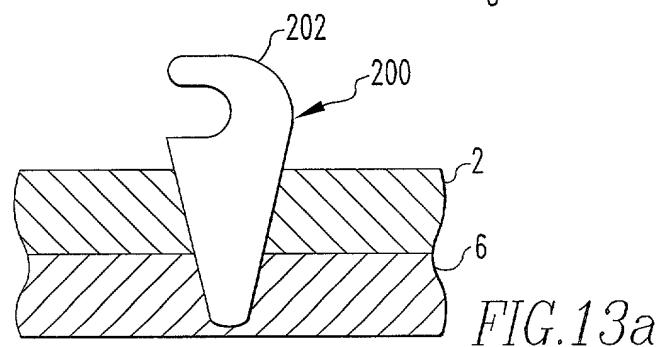
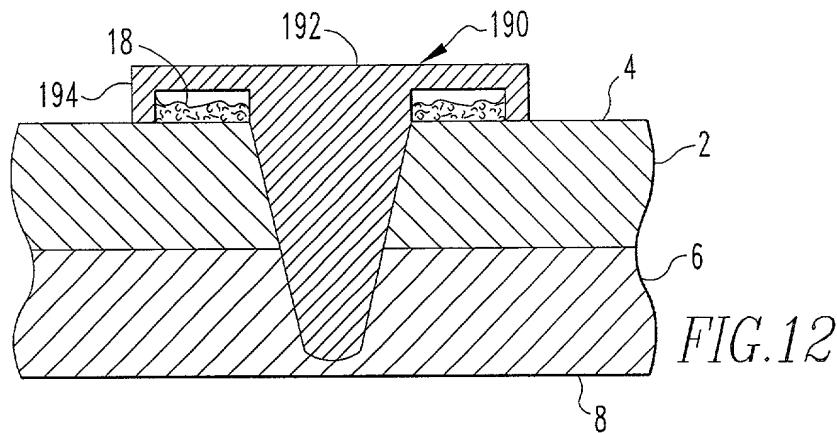
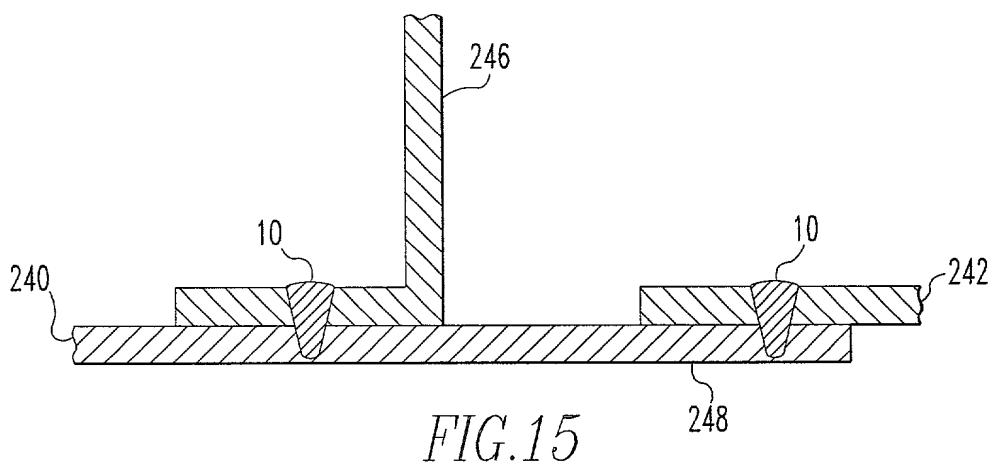
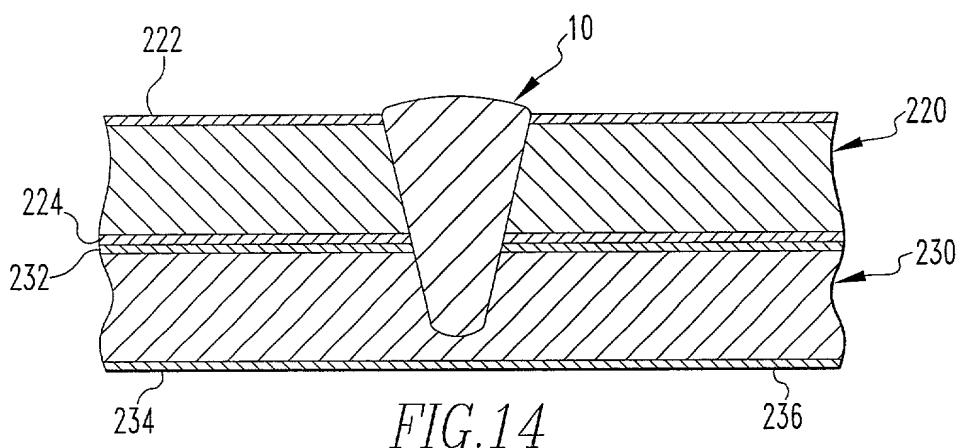


FIG. 9d







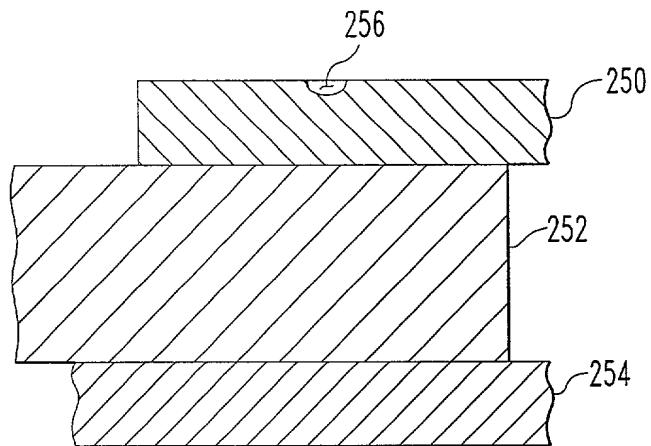


FIG.16a

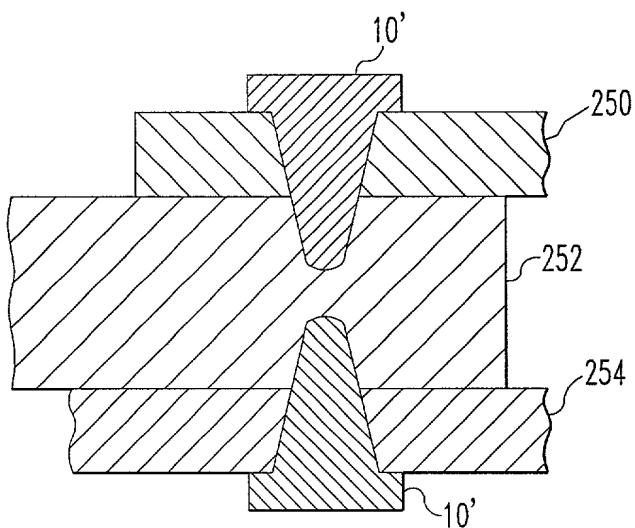


FIG.16b